

REMARKS

Claims 1 – 14, 16 and 29-32 are pending in the application. Claim 1 has been added by the amendments above to recite the features of its dependent claim 15, and claim 15 has therefore been cancelled without prejudice or disclaimer. Claims 17 – 28, previously withdrawn from consideration in view of the restriction requirement previously entered by the Examiner, are cancelled above without prejudice or disclaimer, to put the application in condition for allowance. Claims 31 and 32 are added by the amendments above. Claim 31 is dependent from claim 10 and recites the same carbon black definition as amended claim 1. Accordingly, no new matter is presented by claim 31, and it is properly included in the group of claims under consideration. Claim 32 is dependent from claim 12 and recites the same carbon black definition as amended claim 1. Accordingly, no new matter is presented by claim 32, and it is properly included in the group of claims under consideration.

In view of the forgoing amendments and the following remarks, Applicants respectfully request withdrawal of all claim rejections and allowance of all claims under consideration in the application.

Claims 1 – 16 and 29 – 30 Meet the Requirements of 37 C.F.R. § 112

Claims 1 – 16 and 29 – 30 stand rejected under § 112, second paragraph, as being indefinite for not providing units for the properties BET and CDBP. Applicants respectfully traverse the rejection.

Applicants' claims are not indefinite because the units for the properties BET and CDBP would be readily apparent to the person of ordinary skill in the art. In addition, the units for BET and CDBP can be found in the specification at least at page 5, paragraph 16. Thus, the subject claims are definite and, accordingly, Applicants request that the Examiner withdraw the rejection.

Claims 1 – 16 and 29 – 30 Are Patentable Over Laube et al

Claims 1 – 16 and 29 – 30 are rejected under 35 U.S.C. § 102(e) and in the alternative under 35 U.S.C. § 103(a) over Laube et al. The Applicants respectfully traverse the rejection.

Claim 1 is patentable over Laube et al. because Laube et al. fails to disclose, teach or suggest an elastomer composite comprising an elastomer and particulate filler dispersed in the elastomer, the particulate filler comprising at least one carbon black having structure and surface area values meeting the equation $CDBP \leq (BET \div 2.9) - X$, wherein X is about 5. As amended, the claims define an elastomer composite comprising at least one carbon black different from any disclosed, taught or suggested by Laube et al. In particular, Laube et al. does not disclose, teach or suggest elastomer comprising carbon black having structure and surface area values meeting the equation $CDBP \leq (BET \div 2.9) - X$, wherein X is about 5.

As amended, the subject claims define elastomer composite comprising carbon black in a region of CDBP and BET values that does not overlap the carbon blacks of Laube et al. For example, as amended the subject claims do not cover BP880. Laube et al. does not discuss CDBP values or its relationship to BET values, and it is fair to say that Laube et al. was simply blind to the possibility of the elastomer composites of the subject claims, consistent with the traditional commercial avoidance of carbon blacks (for use in elastomer composites) with such high surface areas and low structure .

The high surface area, low structure carbon blacks of the claimed elastomer composite are found to provide excellent physical properties or performance characteristics, but were traditionally avoided for elastomer composites for being too difficult to incorporate effectively into elastomer. As stated in the specification, there has been a long felt need in industry for elastomer composites having the improved properties:

While a wide range of performance characteristics can be achieved employing currently available materials and manufacturing techniques, there has been a long standing need in the industry to develop elastomeric compositions having improved properties, especially elastomer compositions that can be produced effectively and economically.

Specification, Paragraph [0002]. It is significant, therefore, that such excellent physical properties and performance characteristics are achievable with exemplary embodiments of the elastomer composites of the subject claims. The present specification discusses such physical properties and performance characteristics in considerable detail. See, for example, the discussion of tear strength at paragraph [0019] *et seq.* and the discussion of Shore A hardness, tensile strength and elongation at paragraph [0030] *et seq.*, and the discussion of abrasion resistance at paragraph [0035] *et seq.*

For the forgoing reasons claim 1 is patentable over Laube et al. Claims 2-14, 16 and 29-30 depend from claim 1, either directly or indirectly, and are patentable over Laube et al. for at least the same reasons set forth above. Accordingly, applicants request withdrawal of the rejection.

Claims 31 and 32 are Patentable Over the Art of Record

Claims 31 and 32, newly presented above, are patentable over all art of record. In particular, claims 31 and 32 depend indirectly from claim 1 and are patentable over Laube et al. for at least the same reasons set forth above.

Conclusion

In view of the foregoing remarks, Applicants request allowance of claims 1 – 14, 16 and 29 – 32.

Respectfully submitted,
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